What is claimed is:

1. A process for production of ultrashort-cut fibers, characterized in that a fiber bundle is formed by binding numerous individual filament groups mutually parallel in the direction of the fiber lengths; said fiber bundle is embedded with an embedding agent which is gasified or liquefied by heating, said embedding agent is solidified to create a shaving material having the fiber bundle embedded in the embedding material, and the shaving edge of the embedded fiber bundle is thinly shaved at a temperature at which said embedding material does not gasify or liquefy, to obtain ultrashort-cut fibers having cut fiber lengths of no greater than 1.0 mm.

2. A process for production of ultrashort-cut fibers according to claim 1, wherein the fiber lengths of the produced ultrashort-cut fibers are 0.05-0.1 mm.

3. A process for production of ultrashort-cut fibers according to claim 1, wherein the produced ultrashort-cut fibers are conjugated fibers comprising at least two different thermoplastic resins.

4. A process for production of ultrashort-cut fibers according to claim 1, wherein the sizes of said individual filaments are 0.001-10 dtex and the overall size of said fiber bundle composed of the individual filament groups is 10,000-10 million dtex.

5. A process for production of ultrashort-cut fibers according to claim 1, wherein said embedding material is at least one material selected from the group consisting of dry ice, ice, paraffin and materials composed of thermoplastic resins with a lower melting point than said fiber bundle.

6. A process for production of ultrashort-cut fibers

according to claim 1, wherein yarn from one or more wound yarns, which are formed by winding up the multifilament yarn composed of numerous individual filament groups, is unrolled and fed for winding, each of the yarns unrolled from the plurality of wound yarns is doubled when fed to the winding, a fiber bundle having a prescribed overall size by lap winding of the yarns fed to the winding is obtained by winding up on a reel while applying a prescribed winding tension so as to form linear paralleled sections wherein the individual filaments composing the fiber bundle are parallel to each other, and then at least the sections where the individual filament groups composing the fiber bundle are in a linear paralleled state are subjected to embedding treatment wherein the liquid or gaseous embedding agent is allowed to infiltrate between the individual filament groups forming the fiber bundle while surrounding the fiber bundle, and the linear paralleled fiber bundle sections which have been embedded are cut to prepare shaving materials.

7. A process for production of ultrashort-cut fibers according to claim 6, wherein said reel has a polygonal or rod-like shape, there being formed folded sections in the fiber bundle at each of the vertices of said polygonal reel or both ends of said rod-like reel, and said "linear paralleled sections wherein the individual filaments composing the fiber bundle are parallel to each other" are formed between said folded sections.

8. A process for production of ultrashort-cut fibers according to claim 6, characterized in that a jig is attached for anchoring of both ends of the fiber bundle sections supplied for embedding treatment, in said linear paralleled sections formed on said reel, so that the individual filament groups composing the fiber bundle do not change their relative positions, or else both ends are impregnated with an adhesive

and the fiber bundle is removed from the reel without causing major deformation of the fiber bundle on the reel, after which the removed fiber bundle is subjected to embedding treatment while applying a prescribed tension thereto.

9. A process for production of ultrashort-cut fibers according to claim 1, wherein numerous small fiber bundles obtained by binding mutually paralleled individual filament groups are separately aligned without contacting each other and formed into a fiber bundle, and the liquid embedding agent is allowed to infiltrate between said individual filament groups while surrounding the fiber bundle, after which the liquid embedding agent is caused to undergo phase change from a liquid state to a solid state for solidification to prepare a shaving material.

10. A process for production of ultrashort-cut fibers according to claim 9, characterized in that said small fiber bundles are formed in such a manner that the maximum required infiltration distance into said small fiber bundles by said embedding material which has changed phase to a gaseous or liquid state is no greater than 5 mm.

11. A process for production of ultrashort-cut fibers according to claim 9, wherein said small fiber bundles are flat.

12. A process for production of ultrashort-cut fibers according to claim 9, wherein said embedding agent which has changed phase to a liquid state is degassed beforehand.

13. A process for production of ultrashort-cut fibers according to claim 1, wherein water is used as said embedding agent, and when the shaving material is prepared by allowing said fiber bundle to stand in the water filled in a freezing vessel and freezing the fiber bundle immersed in the water, the water surface section is heated while evacuating the air above the water surface from the top of said freezing vessel,

to accomplish freezing of the water filled in said freezing vessel while preventing freezing of the water surface section.

14. A process for production of ultrashort-cut fibers according to claim 13, wherein the air evacuation above said water surface is carried out under a slightly negative pressure of 30-650 Torr.

15. A process for production of ultrashort-cut fibers according to claim 13, wherein a surfactant is mixed with said water.

16. A process for production of ultrashort-cut fibers according to claim 13, wherein the freezing treatment is carried out while applying microvibrations to said freezing vessel.

17. A process for production of ultrashort-cut fibers according to claim 13, wherein said ultrashort-cut fibers shaved in a frozen state are freeze dried while maintaining the frozen state.

18. A process for production of ultrashort-cut fibers according to claim 17, characterized in that during production of ultrashort-cut fibers by thinly shaving the edge of said fiber bundle which has been subjected to embedding treatment, air is included between the ultrashort-cut fibers cut out in a frozen state when they are accumulated, whereby the accumulated aggregates of ultrashort-cut fibers are rendered porous, the porous aggregates are cold insulated at a temperature below the melting point of ice, and the cold insulated aggregates are supplied for freeze drying.

19. A process for production of ultrashort-cut fibers according to claim 1, wherein a plurality of said shaving materials are prepared, the group of shaving materials with the shaving edges formed orthogonal to the direction of the fiber lengths is set so that the cutting face is horizontal, and said shaving edges are subjected to planing with at least

one shaving blade for removal of said embedding material from the planed shaving materials to obtain ultrashort-cut fibers with fiber lengths of 0.005-0.1 mm.

20. A process for production of ultrashort-cut fibers according to claim 19, wherein the embedding treatment is carried out with said trimming target integrated into said embedding material in such a manner that said plurality of fiber bundles are set in a densely parallel state.

21. An apparatus for production of ultrashort-cut fibers, which is provided at least with a shaving blade which shaves a shaving material, comprising a fiber bundle formed of individual filament groups paralleled in one direction and embedded in an embedding material, a blade stand anchoring said shaving blade, holding means which holds said shaving material in such a manner that the direction of alignment of the fibers is orthogonal to the shaving direction of said shaving blade, and driving means which moves said holding means and/or said shaving stand relative to the direction of shaving of said shaving material, wherein said shaving material is thinly shaved by said shaving blade to produce fibers having shaved fiber lengths of 0.005-1.0 mm.

22. An apparatus for production of ultrashort-cut fibers according to claim 21, wherein said holding means is provided with insulating means and/or cold-sustaining cooling means to maintain a temperature at which said embedding material does not change from a solid state to a liquid or gaseous state.

23. An apparatus for production of ultrashort-cut fibers according to claim 21, wherein said driving means is means for rotary driving or back-and-forth driving of said blade stand.

24. An apparatus for production of ultrashort-cut fibers according to claim 21, wherein said driving means is rotary driving means for rotary driving of said blade stand, and said blade stand is provided with one or more protruding shaving

blades arranged in a radial fashion from the rotational center of said blade stand toward the radial direction.

25. An apparatus for production of ultrashort-cut fibers according to claim 24, wherein the rotational speed of said blade stand rotated by said rotary driving means is freely adjustable.

26. An apparatus for production of ultrashort-cut fibers according to claim 21, wherein there is formed in said blade stand a contact plane which contacts the shaving edge of the shaving material, and said shaving blade protrudes against said contact plane in such a manner that the ultrashort-cut fiber lengths obtained after shaving said fiber bundle are 0.005-1.0 mm.

27. An apparatus for production of ultrashort-cut fibers according to claim 26, which is provided with protrusion length adjusting means which freely adjusts the protrusion length of said shaving blade from said contact plane.

28. An apparatus for production of ultrashort-cut fibers according to claim 26, which is provided with contact pressure applying means which causes said shaving material to contact with said contact plane at a prescribed contact pressure.

29. An apparatus for production of ultrashort-cut fibers according to claim 24, wherein cooling means is attached to the shaving blade to draw out heat generated by said shaving blade during shaving, in order to keep said shaving blade at a constant temperature.

30. An apparatus for production of ultrashort-cut fibers according to claim 21, which comprises a freezing treatment apparatus which freezes said fiber bundle in water and is provided with at least a freezing vessel filled with water in which said fiber bundle is immersed in a resting state, a cover member which is provided at the top of said freezing vessel and maintains the vessel interior in a sealed state, a

heating device which heats the top of the vessel including the water surface of the water filled in said freezing vessel to prevent its freezing, a refrigerating device for cooling of said freezing vessel, and an exhauster attached to said cover member.

31. An apparatus for production of ultrashort-cut fibers according to claim 30, wherein a gas-liquid separator is provided between said cover member and said exhauster.

32. An apparatus for production of ultrashort-cut fibers according to claim 30, wherein a microvibrator is provided to supply microvibrations to said freezing vessel.

33. An apparatus for production of ultrashort-cut fibers according to claim 21, wherein feeding means is provided for forceful intermittent feeding of said shaving material to said shaving blade in such a manner that the ultrashort-cut fiber lengths obtained after shaving of the shaving edge of the shaving material are 0.005-1.0 mm.

34. An apparatus for production of ultrashort-cut fibers according to claim 21, wherein said feeding means is means for intermittently feeding said shaving material to said shaving blade in such a manner that the shaving edge of said shaving material contacts only with said shaving blade.